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B. E. P. Q. 481, Revised Effective October 19, 1949

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

VAPOR-HEAT TREATMENT APPROVED FOR CERTIFICATION OF CERTAIN FRUIT AND VEGETABLES UNDER HAWAIIAN FRUIT AND VEGETABLE QUARANTINE NO. 13

In accordance with 7 CFR § 301.13-4 (b) of the regulations supplemental to Hawaiian Fruit and Vegetable Quarantine No. 13, the following vapor-heat treatment is hereby designated as an administratively approved procedure that meets the requirements for the certification of papayas, bell peppers, Italian squash and tomatoes for interstate movement from Hawaii:

Approved vapor-heat method of treatment.-- In the approved vapor-heat treatment the fruit and vegetables are heated by saturated vapor at 110° F. which in condensing on the fruit and vegetables gives up its latent heat. This latent heat is essential in assuring mortality of eggs and larvae of the oriental fruitfly, the Mediterranean fruitfly and the melonfly, and in raising the temperature of the fruit and vegetables evenly and quickly so as to prevent damage to the treated products. In applying the treatment the saturated vapor is accompanied by a fine water mist and air admixture. The fruit and vegetables are cooled immediately after treatment and no wax or paraffin, either dry or in solution, may be used until after the treatment has been completed. Vapor-heat treatments are approved only if the vapor conditions within the heat treating room, the manner of stacking the boxes containing the fruit and vegetables in the room, and all other conditions affecting the efficacy of the treatment are satisfactory, in the opinion of the supervising inspector, to assure mortality of eggs and larvae of the oriental fruitfly, the Mediterranean fruitfly, and the melonfly.

In applying this treatment, in accordance with these principles, the temperature of the fruit and vegetables shall be raised to 110° F., at the approximate center of the fruit, in a period of 8 hours, and shall be held at that level during the following 8-3/4 hours.

This treatment must be conducted in a heat-treating room approved by the Bureau of Entomology and Plant Quarantine and must be conducted under the supervision of an inspector of that Bureau, who at all times shall have access to the fruit and vegetables while they are undergoing treatment. All subsequent handling, including packing, grading, transportation, and lading aboard the carrier, must also be under the supervision of the inspector. The Bureau will approve only those rooms which are adequately equipped to handle and treat the fruit and only at locations approved by the inspector. While the results of experiments so far conducted have been successful, it should be emphasized that inexactness and carelessness in using the approved method of treatment may result in injury to the fruit and vegetables treated. In approving this treatment the United States Department of Agriculture does not accept responsibility for fruit or vegetable injury.

(Sec. 8, 37 Stat. 318, as amended, 7 U. S. C. 161; 7 CFR 301.13-4 (b))

Done at Washington, D. C., this 14th day of October, 1949.

P. N. Annand

Chief, Bureau of Entomology and Plant Quarantine

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